

A day was spent in the famous Quohog Bay. I dredged the whole length of the bay and found it absolutely barren, except a very interesting colony at the head of the bay. The species found there were: *Ensis directus*, *Callocardia morrhuana*, *Macoma calcaria*, *M. balthica*, *Yoldia limatula* (the largest I have ever seen), *Venus mercenaria*, *Mysella planulata*, *Gemma gemma*, *Tellina tenera*, *Retusa pertenuis*, *Crepidula convexa*, *Haminea solitaria*, *Astyris lunata*, *Ostomia trifida*, *bisuturalis*, *winkleyi* and *gibbosa*.

A trip to the biological laboratory at South Harpswell enabled me to rob the cemetery in the next lot, result equal: *Vitrina limpida*, *Cochlicopa lubrica*, *Pupilla muscorum*, *Vallonia excentrica* and *Pyramidella cronkhitei* var. *anthonyi*.

The famous Brown Cow Island was visited. *Helix hortensis* banded and plain was there, but not so abundant as sixteen years ago. I also obtained a few of the beautiful wine-colored *Polygyra albolabris*, together with *Succinea ovalis*, *Pyramidula alternata*, *Vitrea hammonis*, *Vitrina limpida*, *Pyramidula cronkhitei anthonyi*, *Helicodiscus parallelus* and *Cochlicopa lubrica*.

On the whole a very satisfactory summer, with several species added to the marine list.

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ON A COLLECTION OF MARINE GASTROPODA FROM ADEN WITH  
DESCRIPTIONS OF NEW FORMS.

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BY MAXWELL SMITH.

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(Read before the Brooklyn Conchological Club Jan. 29, 1912).

The collection which forms the subject of this paper is a portion of a series collected by Mrs. Blair, the wife of a Governor of Aden. The greater portion of this interesting collection is housed in the Royal Scottish Museum of Edinburgh. During the summer of 1910 Mr. Eagle Clarke, the Curator of the Department of Mollusca, placed in my hands a number of shells selected from the Blair collection. Upon reaching London I compared many of the species with the types in the British Museum and also examined the collections made by Messrs Yerbury and Baynham which are preserved in the same institution.

A brief résumé of the work that has already been done at Aden

may be of interest. One of the most exhaustive treatises dealing with molluscan life in these waters may be found in the proceedings of the Zoological Society of London, 1891, part iii. In this paper Mr. E. A. Smith lists the collections made at Aden by Major Yerbury and the Rev. Mr. Baynham. Mr. Smith also gives a review of the principal collections previously recorded from Aden. Signor Caramagna, Dr. Jousseume and the Rev. A. H. Cooke reported on mollusks from the vicinity of Aden. After the appearance of Mr. Smith's paper Commander E. R. Shopland was apparently the next person who collected extensively at Aden. His field work was accomplished between 1892 and 1901. An account of the results may be found in the Proceedings of the Malacological Society of London (Vol. 5 page 171).

My best thanks are due Mr. Eagle Clarke of Edinburgh and Mr. E. A. Smith of London for their kindness in supplying data, without which it would have been impossible to prepare this paper.

*Sepia rouxii* D'Orb. According to Tryon this cephalopod inhabits the Red Sea and Indian Ocean. It is thus natural to find it in the Gulf of Aden, which connects the two.

*Conus amadis* Auct.

*Conus betulinus* L.

*Conus cuvieri* Crosse. As Mr. E. A. Smith writes, this species is not identical with *C. cervus*. In my opinion *cuvieri* is a distinct species.

*Conus nussatella* L.

*Conus taeniatus* Hwass.

*Conus textile* L.

*Terebra cærulescens* Lk.

*Terebra cinerea* Born.

*Terebra clarkei* n. sp. Plate IV, fig. 18.

Shell slender, shining, suffused irregularly with golden brown; whorls 9-10, somewhat gradually increasing, distinctly rounded; apex acute, darker in color; surface closely plicated, forming on the earlier whorls slightly crenulated sutures, plications extending to the base; distinctly three banded, the two lower bands closer together; aperture long.

This species comes in the same section of the genus as *T. nitida* Hinds. From *Terebra celidonota* Melvill & Sykes it differs in being more slender. The aperture is also longer and there are three spiral

bands in place of the one band, near the suture, which occurs in *celidonota*. In *clarkei* only one of the bands is visible on the upper whorls. I take pleasure in naming this species after Mr. Eagle Clarke. Type in the writer's collection.

*Terebra lamarekii* Kien. I agree with Mr. Smith upon the validity of this species. The examples before me are well defined and show little variation. Tryon and Reeve considered it a variety of *T. duplicata* L. In the latter the longitudinal striæ are farther apart. The style of coloration is also strikingly peculiar.

*Pleurotoma tigrina* Lk.

*Murex palma-rosæ* Lk. Not previously reported from Aden.

*Murex ramosus* L.

*Murex rota* Sowb. Fresh beach specimens were obtained of this beautiful species.

*Murex tenuispina* Lk. This and *M. palma-rosæ* may have been obtained at some distance from Aden.

*Columbella picta* Reeve. Pl. IV. fig. 13. Up to the present the locality of this species has been unknown. The specimen before me agrees perfectly with the type in the British Museum.

*Columbella misera* Sowb. var. *californica* Reeve. Plate IV, fig. 15. Dr. Pilsbry, to whom I submitted the single example, writes "this occurs in Japan—not in California, which was an error of Reeve's."

*Columbella propinqua* E. A. Smith. Plate IV, fig. 14. The type is in the British Museum.

*Columbella terpsichore* Leathes. Plate IV, fig. 12. Aden, as the first locality known for this species, was reported by Shopland. The type is in the British Museum.

*Eburna valentiana* Swainson. I am inclined to believe that this is only a stout form of *E. spirata* as pointed out by Von Martens.

*Nassa albescens* Dunker.

*Nassa arcularia* L.

*Nassa bimaculosa* A. Ad. From other examples in my collection I conjecture that *bimaculosa* is a valid species.

*Nassa canaliculata* Lam.

*Nassa coronata* Lam.

*Nassa fissilabris* A. Ad.

*Nassa gemmulata* Lam.

*Nassa nodifera* Powis.

*Nassa pulla* L.

*Nassa pulla* L., var. *minor*, n. var. Plate IV, fig. 17. The length of this shell is about the same as the aperture of the type. All the examples obtained are of the same size.

*Vasum cornigerum* Lam.

*Ricinula ricinus* L.

*Rapana bulbosa* Solander.

*Cancellaria melanostoma* Sowb.

*Mitra costellaris* Lam. Apparently the first record of the species in these waters. Shopland reports 50 species of *Mitra* as occurring at Aden. With the addition of two species taken by Yerbury and Baynham, and the present two species, the total number is brought up to 54.

*Mitra crenulata* Lam.

*Mitra deshayesii* Reeve. This species may be said to inhabit the triangle formed at the corners by Polynesia, Mauritius and the Red Sea. It has not before been reported from the Gulf of Aden.

*Mitra plicata* Lam.

*Latirus polygonus* Gmelin.

*Harpa minor* Rumph.

*Harpa ventricosa* Lam.

*Oliva andamanensis* Bdg. Plate IV, fig. 7. The four examples before me agree perfectly with those in the British Museum, which were taken at the Andaman Islands.

*Oliva inflata* Lam. From the number of individuals taken, this must be an abundant form.

*Ancillaria acuminata* Sowb.

*Ancillaria albisulcata* Sowb. A characteristic feature of this species is the long white columella.

*Ancillaria castanea* Sowb. I am inclined to believe that this species will prove to be a variety of *A. fulva*. The color is the only distinction.

*Ancillaria fulva* Swains. The columella of this species is considerably thickened at the base.

*Marginella obscura* Reeve. Plate IV, fig. 16. The locality of this species was for many years unknown. In 1891 Mr. E. A. Smith discovered the species among the Yerbury and Baynham Collections and included it in his list (P. Z. S. L.). When in London I examined these shells and also the type. The Blair shells are slightly larger, but otherwise similar to the type.

*Cassis nodulosa* Gmelin. The example before me is remarkably fine. There are 12 tubercles on the margin.

*Lotorium pilearis* L.

*Natica lineata* Lam.

*Natica chinensis* Lam.

*Naticina papilla* Gmel.

*Cypræa clandestina* L.

*Cypræa cruenta coloba* Melvill.

*Cypræa erosa nebrites* Melvill. Plate IV, fig. 9.

*Cypræa erosa subalba*, n. var. Plate IV, fig. 11.

This beautiful new variety of *erosa* comes nearest to *nebrites*. It differs from the latter in possessing milk white "specks" on a violet white ground. The ocellations are not so persistent as in the var. *nebrites*. The brown square spots, however, are similar. Type in the writer's collection.

*Cypræa erosa carmen* n. var. Pl. IV, fig. 10. Sides much swollen, pitted and furrowed above the callus on the left side. The base is white, having none of the stippling of *nebrites*, and the squarish spot at the side is nearly or quite covered by the basal callus. The back is pale lilac-pink with traces of white spotting at the sides only. Two cotypes measure 32 and 24 mm. long, in coll. A. N. S. P. (No. 106457) and my own.

*Cypræa erronea* L.

*Cypræa felina ursellus* Gmel. This variety may easily be distinguished by the white base.

*Cypræa helvola* L. Pl. IV, fig. 8.

*Cypræa helvola* L. var. *mascarena* Melvill. Plate IV, fig. 6.

*Cypræa isabella*, L.

*Cypræa pantherina* Sol. Among the series are the vars. *theriaca* (one nearly black), *albonitens* and *syringa*.

*Cypræa staphylæa* L. This species has apparently not been reported from Aden.

*Cypræa stolidia* L. This new record extends the western range beyond Ceylon.

*Cypræa talpa* L.

*Cypræa tigris* L. One individual is  $4\frac{1}{2}$  inches long.

*Cypræa turdus* Lk. The Aden shells are large. I have in my collection three similar specimens which were taken at Muscat, Arabia. This species reaches its greatest development in the Per-

sian Gulf, where the shells are of the same size but greater in weight. The dorsal surface of the Persian Gulf examples I find white and the coloring also somewhat lighter.

*Turritella columnaris* Kien.

*Mitrolaria equestris* L. var. *tortillis* Reeve.

*Strombus columba* Lam. Tryon when writing the Manual was uncertain as to the presence of this species in the Red Sea. Shopland's report and the present record confirm the presence of the species in these waters.

*Strombus gibberulus* L.

*Strombus mauritanus* Lam. Tryon and Paetal cite Mauritius as the home of this Strombus. I doubt if it was collected so far north.

*Strombus variabilis* Swains.

*Rostellaria curvirostra* Lam. A young specimen is of interest. There are 14 whorls present. The embryonic whorl is pearly, the following  $10\frac{1}{2}$  whorls covered with the longitudinal plications, the remaining whorls smooth except the lower portion of the body whorl which is ornamented with spiral lines. The opercula of an adult is twisted and the under surface raised in the center.

*Bullaria ampulla* L.

*Hydatina physis* L.

*Umbraculum indicum* Lam.

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#### NOTE ON A VARIETY OF POLYGYRA FALLAX.

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BY H. A. PILSBRY.

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The group *Triodopsis* in States of the Atlantic slope presents numerous forms which by their variations perplex the conchologist. *Polygyra* (*Triodopsis*) *hopetonensis* (Shuttlw.) in its various varieties is a widely-spread species. The variety *obsoleta* from Newbern, N. C., probably belongs to it, but it needs further investigation with more specimens.

*Polygyra vannostrandii* (Bld.) is distinct by its closely coiled whorls, but the aperture is like that of *P. fallax*, both having large teeth, the basal tooth inclined to be double and the outer lip-tooth wide and deep-seated. The two species are not always easy to tell